

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/519,862	FUHRER, GERHARD	
	Examiner	Art Unit	
	David D. Le	3681	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 11 December 2006.
2. ☒ The allowed claim(s) is/are 10-16.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>12/11/06</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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### **DETAILED ACTION**

1. This is the second Office action on the merits of Application No. 10/519,862, filed on 29 December 2004. Claims 10-16 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - Information Disclosure Statement, received on 12/29/04
  - Replacement Drawings, received on 12/29/04
  - Foreign Priority Document, received on 12/29/04
  - Information Disclosure Statement, received on 12/11/06

### **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with applicant's attorney, Michael J. Bujold, on 23 February 2007.

The application has been amended as follows:

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Claim 10:

Claim 10 has been rewritten as follows:

--A gear shifting system for idler wheels (3), comprising:

a plurality of sliding sleeves (2) torsionally fixed to a main shaft (1) and engaging with the idler wheels (3) to be shifted by axial displacement of the sliding sleeves (2), each sliding sleeve including first and second opposing circumferential faces (9,10) parallel to and spaced apart along an axis of rotation of the sliding sleeve; and

a plurality of adjusting units (4) engaging with corresponding sliding sleeves (2), each adjusting unit (4) including a servo-motor having a pin (5) mounted eccentrically on motor shaft (6) and engaging with the first and second circumferential faces (9,10) of the sliding sleeve (2) whereby eccentric rotation of the pin (5) with rotation of the motor shaft (6) causes selectable axial movement of the corresponding sliding sleeve (2) and two of the plurality of adjusting units (4) engage with each sliding sleeve (2) to facilitate movement thereof.--

Claim 11:

Claim 11 has been rewritten as follows:

--The gear shifting system according to claim 10, wherein the pin (5) reaches dead center of a shifting path of the sliding sleeve (2) during a circular motion of the motor shaft (6) and the sliding sleeve (2) maintains a form-locking connection of one of the idler wheels (3) to be shifted in the dead center.--

Claim 13:

Claim 13 has been rewritten as follows:

--The gear shifting system according to claim 12, wherein the detection device (12) is integrated into each of the plurality of adjusting units (4).--

Claim 14:

Claim 14 has been rewritten as follows:

--The gear shifting system according to claim 10, wherein the two of the plurality of adjusting units (4) engaging each of the sliding sleeves (2), are arranged offset about the main shaft (1) at an angle of about  $180^0$  with respect to one another.--

Claim 16:

Claim 16 has been rewritten as follows:

--A gear shifting system for idler wheels (3), comprising:

a plurality of sliding sleeves (2), each sliding sleeve (2) being torsionally fixed to a main shaft (1) and engaging with at least one idler wheel (3) to be shifted by means of axial displacement of the sliding sleeve (2);

each sliding sleeve including a circumferential recess (8) having first and second opposing face sides (9, 10) parallel to and spaced apart along an axis of rotation of the sliding sleeve;

a plurality of adjusting units (4), two or more of the plurality of adjusting units (4) engaging with a corresponding sliding sleeve to selectively axially displace the corresponding sliding sleeve (2) along the main shaft (1) and including a servo-motor having a motor shaft (6) rotating about an axis perpendicular to an axis of the main shaft, and each of the adjusting units (4) having a pin (5) mounted eccentrically on the motor shaft (6) to have an axial movement along the axis of the main shaft as the motor shaft (6) rotates and engaged with the recess (8) of the corresponding sliding sleeve (2) whereby eccentric rotation of the pin (5) causes selectable axial displacement of the corresponding sliding sleeve (2).--

***Allowable Subject Matter***

4. Claims 10-16 are allowed.
5. The following is an examiner's statement of reasons for allowance:

**Claim 10:**

The prior art of record fails to show or render obvious a gear shifting system for idler wheels comprising a plurality of sliding sleeves, a main shaft, a plurality of adjusting units, a servo-motor, and a pin eccentrically mounted on a motor shaft, as recited in the claim; specifically, wherein two of the plurality of adjusting units engage with each sliding sleeve to facilitate movement thereof.

*Claim 16:*

The prior art of record fails to show or render obvious a gear shifting system for idler wheels comprising a plurality of sliding sleeves, a main shaft, a circumferential recess, a plurality of adjusting units, a servo-motor, and a pin eccentrically mounted on a motor shaft, as recited in the claim; specifically, wherein two or more of the plurality of adjusting units engage with a corresponding sliding sleeve to selectively and axially displace the corresponding sliding sleeve along the main shaft.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

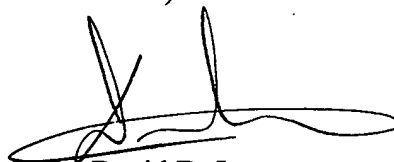
***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'David D. Le', with a long horizontal flourish extending to the right.

David D. Le  
Examiner  
Art Unit 3681  
02/26/2007

ddl